

REMARKS

Claims 1-11 are pending in the application. The claims have been amended to correct typographical errors and matters of form to further clarify the presently claimed invention. No new matter has been inserted into the application.

Rejection Under 35 USC § 102(b) over '677 (U.S. Patent 4,943,677)

Claims 1-11 have been rejected under 35 U.S.C. §102(b) as being anticipated by '677. Applicants traverse this rejection. Reconsideration and withdrawal thereof are respectfully requested.

The Presently Claimed Invention

The presently claimed invention is directed to a method of preparing a catalyst for polymerization of aliphatic polycarbonates comprising reacting a zinc precursor with organic dicarboxylic acid in a solution including a templating agent. The claimed invention is also directed to a method of polymerizing an aliphatic polycarbonate.

'677

'677 discloses poly(alkylene carbonates) of controlled molecular weight made by copolymerizing carbon dioxide and one or more oxirane compounds using zinc polycarboxylate catalyst in the presence of a sterically hindered organic proton donor. However, '677 fails to disclose or suggest a method of preparing a catalyst for polymerization of aliphatic polycarbonates comprising reacting a zinc precursor with organic dicarboxylic acid in a solution that includes a templating agent and a method of polymerizing an aliphatic polycarbonate as in the presently claimed invention.

Distinctions of the presently claimed invention over '677

Applicants submit that a templating agent is used to prepare a catalyst for polymerization of aliphatic polycarbonates in the presently claimed invention. Applicants

note that the templating agent acts to modify and control the morphology of inorganic materials and such modification of morphology allows the surface structure on which catalyst activity depends to be of a molecular scale, and therefore such morphological modification improves catalytic activity as discussed in the specification of the present application. Accordingly, the presence of the templating agent is a significant feature of the claimed invention as it improves catalytic activity in comparison to conventional catalyst prepared without the templating agent. The '677 reference is an example of a teaching of such conventional catalyst preparation without a templating agent.

The '677 reference fails to teach or suggest use of any templating agent. Therefore, '677 fails to anticipate the presently claimed invention.

Rejection Under 35 USC § 103(a) over '677 in view of Li-Chen (Li-Chen et al., 1987)

Claims 1-11 have been rejected under 35 U.S.C. §103(a) as being obvious over '667 in view of Li-Chen. Applicants traverse this rejection. Reconsideration and withdrawal thereof are respectfully requested.

'677 is discussed above.

Li-Chen

The Li-Chen reference discloses polymer-supported zinc catalysts which were prepared by the reaction of diethylzinc with polymers containing carboxyl groups. However, Li-Chen fails to disclose or suggest a method of preparing a catalyst for polymerization of aliphatic polycarbonates comprising reacting a zinc precursor with organic dicarboxylic acid in a solution including a templating agent and a method of polymerizing an aliphatic polycarbonate as in the presently claimed invention.

Distinctions of the presently claimed invention over the cited references

As discussed above, '677 fails to teach or suggest use of any templating agent. The Li-Chen reference fails to remedy the deficiencies in '677 in failing to disclose or suggest use of any templating agent to prepare a catalyst for polymerization of aliphatic polycarbonates as in the presently claimed invention. Li-Chen discloses merely that the polymer containing carboxyl groups acts as a supporter, but not as a templating agent as in the presently claimed invention.

Further, in the presently claimed invention, the templating agent is removed during the filtering step after completion of the reaction so that the templating agent is not present any longer in the resulting catalyst as described at page 5 in the specification of the present application. In contrast, in the Li-Chen reference, the polymers are not removed and remain in the catalyst.

Therefore, Li-Chen is not applicable to the presently claimed invention and none of the cited references discloses or suggests the use of the templating agent to prepare a catalyst for polymerization of aliphatic polycarbonates. Accordingly, the presently claimed invention is not obvious over the cited references.

Conclusion

It is believed that the application is now in condition for allowance. Applicants request the Examiner to issue a notice of Allowance in due course. The Examiner is encouraged to contact the undersigned to further the prosecution of the present invention.

The Commissioner is authorized to charge JHK Law's Deposit Account No. **502486** for any fees required under 37 CFR §§ 1.16 and 1.17 and to credit any overpayment to said Deposit Account No. **502486**.

Serial No. 10/519,176

Patent
20010-07USA

Respectfully submitted,

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Dated: May 8, 2006

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